1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Dipotassium peroxodisulfate

Chemical name  Dipotassium peroxodisulfate
Product Name   Klozur KP
Synonyms       Potassium Peroxydisulfate; Dipotassium Peroxydisulfate; Peroxydisulfuric acid, dipotassium salt; Peroxydisulfuric acid, potassium salt
CAS-No          7727-21-1
EC-No           231-781-8
REACH registration number 01-2119495676-19-0001
Formula        K2O8S2 and K2S2O8

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: In situ and ex situ chemical oxidation of contaminants and compounds of concern for environmental remediation applications

Restrictions on Use       Consumer uses: Water treatment chemical, Metal surface treatment products

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier  PeroxyChem LCC
                      Only Representative: PeroxyChem Spain s.l.u.
                      C/ Afueras s/n 50784 La Zaida (Zaragoza) Spain
                      Tel: +34 976 179600

Contact point  Email: sdsinfo-emea@peroxychem.com

1.4. Emergency telephone numbers

For leak, fire, spill or accident emergencies, call:
+1 703-527-3887 (CHEMTREC)
+1 303/ 389-1409 (Medical - U.S. - Call Collect)
2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Hazard Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4, H302</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2; H315</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2; H319</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Category 1; H334</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1; H317</td>
</tr>
<tr>
<td>Specific target organ systemic toxicity (single exposure)</td>
<td>Category 3; H335</td>
</tr>
<tr>
<td>Oxidizing Solids</td>
<td>Category 3; H272</td>
</tr>
</tbody>
</table>

For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16.

2.2. Label Elements

Signal word: DANGER

Hazard Statements
- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H317 - May cause an allergic skin reaction
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335 - May cause respiratory irritation
- H272 - May intensify fire; oxidizer

Precautionary statements
- P220 - Keep/Store away from clothing/ combustible materials
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing water

2.3. OTHER INFORMATION

General Hazards
Risk of decomposition by heat or by contact with incompatible materials
3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Dipotassium peroxodisulfate

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH registration number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Persulfate</td>
<td>231-781-8</td>
<td>7727-21-1</td>
<td>&gt;98</td>
<td>Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) STOT SE 3 (H335) Ox. Sol. 3 (H272)</td>
<td>01-2119495676-19-0001</td>
</tr>
<tr>
<td>Potassium Sulfate</td>
<td>231-915-5</td>
<td>7778-80-5</td>
<td>&lt;2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4.1. Description of first-aid measures

General Advice
Remove from exposure, lie down. Show this material safety data sheet to the doctor in attendance.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids intermittently. Consult a physician. In case of contact, immediately flush eyes with plenty of water. If symptoms persist, call a physician.

Inhalation
Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

Ingestion
Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth. Drink 1 or 2 glasses of water.

4.2. Most important symptoms and effects, both acute and delayed

Itching; Redness; Coughing and/ or wheezing

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Water. Cool containers with flooding quantities of water until well after fire is out.

Extinguishing media which shall not be used for safety reasons
Do NOT use water jet.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
In case of fire, formation of sulphur oxides, nitrogen oxides, toxic pyrolysis products.
5.3. Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear.

OTHER INFORMATION
The product is not combustible. Contact with combustible materials may intensify fires. Adjust fire fighting measures to surrounding fire, if possible. Cool endangered containers with water spray and move out of danger area. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Keep off any unprotected persons. Avoid contact with the skin and the eyes. Avoid breathing dust. Wear personal protective equipment.

6.2. Environmental Precautions
See Section 12 for additional Ecological Information.

6.3. Methods and materials for containment and cleaning up
Vacuum, shovel or pump waste into a drum and label contents for disposal. Avoid dust formation. Store in closed container. Clean up spill area and treat as special waste Dispose of waste as indicated in Section 13

Never add other substances or combustible waste to product residues.

6.4. Reference to other sections.
Dispose of waste as indicated in Section 13

7. HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Avoid dust formation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Avoid contact with skin and eyes. Avoid breathing dust. Remove and wash contaminated clothing before re-use. Reference to other sections.

Additional information
Use clean plastic or stainless steel scoops only

7.2. Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Do not store near combustible materials. Avoid contamination of opened product. Keep away from food, drink and animal feedingstuffs. Avoid formation and deposition of dust.

Materials to avoid
Acids, Bases, Halides, Oxidizing agents, Strong reducing agents, Combustible materials,

7.3. Specific end uses
Refer to Section 1 and the Annex.

8. EXPOSURE CONTROLS/PERSO
8.1. Control parameters

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>European Union</th>
<th>The United Kingdom</th>
<th>Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Persulfate</td>
<td></td>
<td></td>
<td>TWA 0.1 mg/m³</td>
</tr>
<tr>
<td>7727-21-1</td>
<td></td>
<td>STEL 0.3 mg/m³</td>
<td>Sensitizer</td>
</tr>
</tbody>
</table>

Chemical name | France | Spain | Portugal | Spain | Portugal |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Persulfate</td>
<td>TWA 0.1 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7727-21-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chemical name | Denmark | Finland | Norway |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Persulfate</td>
<td>TWA 2 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7727-21-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chemical name | Luxembourg | Poland | Estonia |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Persulfate</td>
<td>TWA 0.1 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7727-21-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chemical name | Latvia | Lithuania | Czech Republic |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Sulfate</td>
<td>TWA 10 mg/m³</td>
<td>TWA 10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7778-80-5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chemical name | Romania | Bulgaria | Russia |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Sulfate</td>
<td>TWA 10.0 mg/m³</td>
<td>MAC 10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7778-80-5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Derived No Effect Level (DNEL)

**DNELs - General Population**

<table>
<thead>
<tr>
<th>Potassium Per sulfate (7727-21-1)</th>
<th>Route of Exposure</th>
<th>Description</th>
<th>DNEL/DMEI</th>
<th>Most Sensitive Endpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute - systemic</td>
<td>dermal</td>
<td>LD0</td>
<td>200 mg/kg bw</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Acute - systemic</td>
<td>Inhalation</td>
<td>LC0</td>
<td>295 mg/m³</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Acute - systemic</td>
<td>oral</td>
<td>LD0</td>
<td>30 mg/kg bw</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Acute - local</td>
<td>dermal</td>
<td>LD0</td>
<td>1.124 mg/cm³</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Acute - local</td>
<td>Inhalation</td>
<td>LC0</td>
<td>295 mg/m³</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Long term - systemic</td>
<td>dermal</td>
<td>NOAEL</td>
<td>9.1 mg/kg bw/day</td>
<td>repeated dose toxicity</td>
</tr>
<tr>
<td>Long term - systemic</td>
<td>Inhalation</td>
<td>NOAEC</td>
<td>1.03 mg/m³</td>
<td>repeated dose toxicity</td>
</tr>
<tr>
<td>Long term - local</td>
<td>dermal</td>
<td>NOAEL</td>
<td>0.051 mg/cm³</td>
<td>repeated dose toxicity</td>
</tr>
<tr>
<td>Long term - local</td>
<td>Inhalation</td>
<td>NOAEC</td>
<td>1.03 mg/m³</td>
<td>repeated dose toxicity</td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC)

8.2. Exposure Controls

**Engineering measures**

Provide local exhaust or general ventilation adequate to maintain exposures below permissable exposure limits.

**Personal protective equipment**

**General information**

Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

**Respiratory Protection**

P2 Dust mask when airborne dust concentrations elevated.

**Eye/Face Protection**

Eye protection recommended. Chemical goggles consistent with EN 166 or equivalent.

**Skin and Body Protection**

Wear suitable protective clothing.

**Hand Protection**

Protective gloves: Neoprene gloves, Polyvinylchloride, Natural Rubber.

**Hygiene measures**

Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Wash hands before breaks and after shifts. Keep work clothes separate, remove contaminated clothing - launder after open handling of product.

**Environmental exposure controls**

The product should not be allowed to enter drains, water courses or the soil.
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline solid</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>6.4 (1% solution)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>&gt; 100 °C</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>Decomposes Decomposes upon heating</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No evidence of combustion up to 600°C</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>6.07E-30 mm Hg at 25°C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>2.48 g/cm³ (crystal density)</td>
</tr>
<tr>
<td>Relative Density</td>
<td>1.39</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available (inorganic)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>5.6 % @ 25 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available (Solid)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 100 °C (assume)</td>
</tr>
</tbody>
</table>

9.2. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Density</td>
<td>1.30 g/cm³ (loose)</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>270.31</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

10.1. Reactivity

Strong oxidizer

10.2. Chemical Stability

Stable under recommended storage conditions. Unstable if heated. Unstable on exposure to moisture. Unstable in presence of contamination.

10.3. Possibility of Hazardous Reactions

Use of persulfates in chemical reactions requires appropriate precautions and design considerations for pressure and thermal relief.

Decomposing persulfates will evolve large volumes of gas and/or vapor, can accelerate exponentially with heat generation, and create significant and hazardous pressures if contained and not properly controlled or mitigated.

Use with alcohols in the presence of water has been demonstrated to generate conditions that require rigorous adherence to process safety methods and standards to prevent escalation to an uncontrolled reaction.

10.4. Conditions to avoid

Moisture; Heat. (decomposes at temperatures >100 °C).

10.5. incompatible materials
Acids, Bases, Halides, Oxidizing agents, Strong reducing agents, Combustible materials,

**10.6. Hazardous Decomposition Products**

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

**11. TOXICOLOGICAL INFORMATION**

**11.1. Information on toxicological effects**

**Acute toxicity**

| LD50 Dermal | > 10000 mg/kg (rat) (Potassium Persulfate) |
| LD50 Oral | 1130 mg/kg (rat) (Potassium Persulfate) |
| LC50 Inhalation | > 42.9 mg/L (rat) (Potassium Persulfate) |

**Skin Contact**

Non-irritating (rabbit). Persulfates in general, specifically diammonium persulfate and dipotassium persulfate, exhibited skin irritation properties in human case reports, following occupational exposure and consumer use.

**Eye Contact**

Irritating to eyes. Has been shown to exhibit eye irritation properties in human case reports following occupational exposure and consumer use. Slightly or non-irritating (rabbit).

**Inhalation**

May cause irritation of respiratory tract. Respiratory irritation has been seen in workers exposed to persulfates. In animals, diammonium persulfate, produced pathological respiratory irritation in a subchronic study.

**Subchronic toxicity**

Oral (NOAEL) = 131.5 mg/kg bw (Potassium Persulfate)
Inhalation (NOAEC) = 10.3 mg/m³ (Ammonium Persulfate)
Dermal: No data available

**Chronic toxicity**

**Sensitization**

Sensitizing to skin and respiratory system.

**Target organ effects**

Eyes. Skin. Respiratory System.

**Carcinogenicity**

Did not show carcinogenic effects in animal experiments.

**Mutagenicity**

In vivo tests did not show mutagenic effects.

**Reproductive toxicity**

Diammonium persulfate did not affect fertility or the developing fetus in animal studies (NOAEL: 250 mg/kg bw).

**12. ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**Ecotoxicity effects**

Not expected to have significant environmental effects, based on data for similar substances.

<table>
<thead>
<tr>
<th>Active Ingredient(s)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium persulfate</td>
<td>96 h LC50</td>
<td>Onchorhyncus mykiss</td>
<td>76.3</td>
<td>mg/L</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>48 h EC50</td>
<td>Water flea</td>
<td>120</td>
<td>mg/L</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>72 h EC50</td>
<td>Marine algae (Phaeodactylum tricornutum)</td>
<td>136</td>
<td>mg/L</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>96 h LC50</td>
<td>Turbot (Scophthalmus maximus)</td>
<td>107.6</td>
<td>mg/L</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>18 h EC10</td>
<td>Pseudomonas putida</td>
<td>36</td>
<td>mg/L</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>5 d</td>
<td>Abra Alba</td>
<td>11</td>
<td>mg/L</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>96 h LC50</td>
<td>Grass shrimp</td>
<td>391</td>
<td>mg/L</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>24 h EC50</td>
<td>Daphnia magna</td>
<td>635.7</td>
<td>mg/L</td>
</tr>
</tbody>
</table>
12.2. Persistence and degradability
Biodegradability does not pertain to inorganic substances.

12.3. Bioaccumulative potential
Does not bioaccumulate.

12.4. Mobility in soil
Dissociates into ions.

12.5. Results of PBT and vPvB assessment
PBT/vPvB assessment is not required for inorganic substances.

12.6. Other Adverse Effects
None known.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Product / Packaging disposal
Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated Packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

ADR/RID
---
UN/ID no: 1492
Proper Shipping Name: Potassium persulfate
Hazard class: 5.1
Packing Group: III

IMDG/IMO
---
UN/ID no: 1492
Proper Shipping Name: Potassium persulfate
Hazard class: 5.1
Packing Group: III

ICAO/IATA
---
UN/ID no: 1492
Proper Shipping Name: Potassium persulfate
Hazard class: 5.1
Packing Group: III

ADN
---
UN/ID no: 1492
Proper Shipping Name: Potassium persulfate
Hazard class: 5.1
Environmental Hazards
This product contains no chemical substance that is listed as a marine pollutant according to DOT

Special Precautions for users
According to United Nations "Recommendations on the transport of dangerous goods"

Transport in bulk according to
MARPOL 73/78 and the IBC Code
See IMDG above

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/ELINCS (Europe)</th>
<th>ENCS (Japan)</th>
<th>China (IECSC)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
<th>AICS (Australia)</th>
<th>NZIoC (New Zealand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Persulfate 7727-21-1</td>
<td>X</td>
<td>X</td>
<td>231-781-8</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Potassium Sulfate 7778-80-5</td>
<td>X</td>
<td>X</td>
<td>231-915-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Directive 2008/98/EC on waste
Applicable

Major Accidents (Directive 2012/18/EU)
Included for storage of quantities exceeding 50 Tm

CWC (Chemical Weapons Convention) - Annex on Chemicals
Not applicable

15.2. Chemical Safety Report
A Chemical Safety Assessment has been carried out for this substance.

16. OTHER INFORMATION

Full text of H-phrases referred to in sections 2 and 3
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation

Restrictions on Use
Consumer uses: Water treatment chemical, Metal surface treatment products.
This product's foreseen or recommended applications are: In situ and ex situ chemical oxidation of contaminants and compounds of concern for environmental remediation applications

Additional information
This Safety Data Sheet has been prepared according to Regulation (EC) 1907/2006 and Regulation (EU) 453/2010
Revision date: 2020-02-18  
Revision note: SDS sections updated: 1

**List of Abbreviations and Acronyms**

- ATE: Acute Toxicity Estimate
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- CE50: Concentración Efectiva Media
- CEN: European Committee for Standardisation
- C&L: Classification and Labelling
- CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
- CLV: Ceiling Limit Value
- CAS#: Chemical Abstracts Service number
- CMR: Carcinogen, Mutagen, or Reproductive Toxicant
- CSA: Chemical Safety Assessment
- CSR: Chemical Safety Report
- DNEL: Derived No Effect Level
- DOT: Department of Transportation
- DPD: Dangerous Preparations Directive 1999/45/EC
- DU: Downstream User
- ECHA: European Chemicals Agency
- EEC: European Economic Community
- EINECS: European Inventory of Existing Commercial Substances
- ELINCS: European List of notified Chemical Substances
- EN: European Standard
- EQS: Environmental Quality Standard
- EUC: European Union
- Euphrac: European Phrase Catalogue EWC
- FDS: Ficha de Datos de Seguridad
- GES: Generic Exposure Scenario
- GHS: Globally Harmonized System
- IATA: International Air Transport Association
- ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air
- IMDG: International Maritime Dangerous Goods
- IMO: International Maritime Organization
- IMSBC: International Maritime Solid Bulk Cargoes
- IT: Information Technology
- IUCLID: International Uniform Chemical Information Database
- IUPAC: International Union for Pure Applied Chemistry
- JRC: Joint Research Centre
- Kow: octanol-water partition coefficient
- LC50: Lethal Concentration to 50% of a test population
- Lethal Dose to 50% of a test population (Median Lethal Dose)
- LE: Legal Entity
- LLV: Level Limit Value
- LoW: List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
- LR: Lead Registrant / Manufacturer / Importer MS Member States
- MSDS: Material Safety Data Sheet
- NOEC: No observed effect concentration
- OC: Operational Conditions
- OECD: Organization for Economic Co-operation and Development
- OEL: Occupational Exposure Limit
- OJ: Official Journal
- OR: Only Representative
- OSHA: European Agency for Safety and Health at work
- PBT: Persistent, Bioaccumulative and Toxic substance
- PEC: Predicted Effect Concentration
Klozur KP

PNEC(s) Predicted No Effect Concentration(s)
PPE Personal Protection Equipment
(Q)SAR Qualitative Structure Activity Relationship
RCR Risk Characterization ratio
RID Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP REACH Implementation Project
RMM Risk Management Measure
SADT Self-accelerating decomposition temperature
SCBA Self-Contained Breathing Apparatus
SDS Safety data sheet
SIEF Substance Information Exchange Forum
SME Small and Medium sized Enterprises
STEL Short-term exposure limit
STOT Specific Target Organ Toxicity (STOT)
RE Repeated Exposure(STOT)
SE Single Exposure Par SVHC Substances of Very High Concern
TSCA Toxic Substances Control Act
TWA Time Weighed Average
UN United Nations
vPvB Very Persistent and Very Bioaccumulative / mPmB Muy Persistente y Muy Bioacumulativo
WGK Wassergefährdungsklassen

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End of Safety Data Sheet